

Application No. 09/808,576
Docket No. 1998U002D2.US
Reply to Office Action Dated April 26, 2004

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-49 (Cancelled)

50. (Original) A catalyst feeder for use in combination with a reactor vessel having within the reactor vessel a reaction zone, the catalyst feeder comprising a catalyst vessel for containing a polymerization catalyst, the catalyst vessel connected to a catalyst injection tube for delivering the polymerization catalyst to the reaction zone, the catalyst injection tube being disposed within a support tube that protrudes through the reactor vessel wall, and the catalyst feeder further comprising a means for contacting the polymerization catalyst with a carrier solution comprising an antistatic agent and a liquid diluent prior to the polymerization catalyst entering the reaction zone.
51. (Original) The catalyst feeder of claim 50 wherein the means for contacting includes a carrier tube for introducing the carrier solution to the catalyst injection tube.
52. (Original) The catalyst feeder of claim 50 wherein the means for contacting is a carrier line for introducing the carrier solution into the support tube and that the catalyst injection tube is recessed sufficiently to provide contact of the polymerization catalyst with the carrier solution prior to their entering the reaction zone.
53. (Original) The catalyst feeder of claim 50 wherein the catalyst feeder further comprises a gas line for introducing a gas into the catalyst feeder.
54. (Original) The catalyst feeder of claim 53 wherein the means for contacting is at least two delivery lines, one for delivering the antistatic agent and one for delivering the liquid diluent.

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55. (Original) The catalyst feeder of claim 54 wherein the at least two delivery lines enter a mixing vessel where the antistatic agent and liquid diluent are combined to form the carrier solution.
56. (Original) The catalyst feeder of claim 54 wherein at least one of the delivery lines is connected to the other resulting in the mixing of the antistatic agent and liquid diluent in at least one of the delivery lines.
57. (Original) The catalyst feeder of claim 50 wherein catalyst feeder further comprises a means for maintaining the carrier solution at a temperature above 50 °C.
58. (Original) The catalyst feeder of claim 50 wherein catalyst feeder further comprises a means for introducing the carrier solution into the reactor intermittently.
59. (Original) The catalyst feeder of claim 50 wherein the polymerization catalyst is a supported bulky ligand metallocene-type catalyst system and the carrier solution comprising from about 2 to 10 weight percent antistatic agent based on the total weight of the supported bulky ligand metallocene-type catalyst system.
- 61-80. (Cancelled)